



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6705G02331-3G

Job Sheet 170181



Part No: RBW6705G02331-3G

Job Qty: 2 ea

Part Name: Rigging Pin Assembly N4



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/11/18

Job Tracking No:

Due Date: 1/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: RBW6705G02331-3G REV.3 IPP Rev.A New issue 17/11/07 JFS Verified by:DP IPP REV:B 17.12.12 ADDED MILL CONV AND QC5 DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea		1/30/18	0.00	0.00	Start Up Machining		MCC
100	Small Fab	2 pcs		1/30/18	0.00	0.67	Small Fab-9		MCC DAS
110	QC	2 pcs		1/30/18	0.00	0.00	QC5		38
115	Mill Conv	2 pcs		1/30/18	0.00	0.33	Mill Conv 1		J.C. MAS 18-02-01
117	QC	2 pcs		1/30/18	0.00	0.00	QC5		38
120	Outsource	2 pcs		1/30/18			MEI001-VC	Outsource 13	Ar 18-02-06
130	Outsource	2 pcs		1/30/18			GRO002-VC		Ar 18-02-05
140	Packaging	2 pcs		1/30/18	0.00	0.00	Packaging2		APAS 18-02-05
150	QC	2 pcs		1/30/18	0.00	0.00	QC6		38
160	Small Fab	2 pcs		1/31/18	0.00	0.33	Small Fab		9-88
190	Packaging	2 pcs		1/31/18	0.00	0.00	Packaging3		MCC
200	QC21-SA	2 Ea		1/31/18	0.00	0.00	QC21		MAR 12 2018

Part Op 100 - 1- Bend as per dwg. 2- Cut to Finished length and drill hole as per dwg. 3- Grind chamfer on both end.

Descriptions: 115 - DRILL HOLE AS PER DWG

120 - 1--Issue P/O to Metcore ; P/O 038999 RC: 26-30 2-Bead blast 3- Certificate of Conformity is required

NOTE DROP SHIP TO FINISHER To ship directly to Groupe Altech

130 - -Issue P/O to Groupe Altech: P/O 39002 -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required

140 - C of C is required.

160 - - Install lanyard as per dwg.

QC 170 QC5 38

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	8893K204	1	6	0	0
160-Small Fab	3896T31	4	296	0	0
	CL-2-C	2	525	0	0
	NAS1756-12	2	182	0	0

Part Specifications

Specifications could not be found.

DART
AEROSPACE
S037141

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA

TEL.: 1 613 632-5200

Email: sales@dartaero.com

www.dartaerospace.com



Rigging Pin Assembly N4

PART NO: RBW6705G02331 – 3G

Original Serial #: S037141

Revision:

Operation: Start up Operation 01/30/18

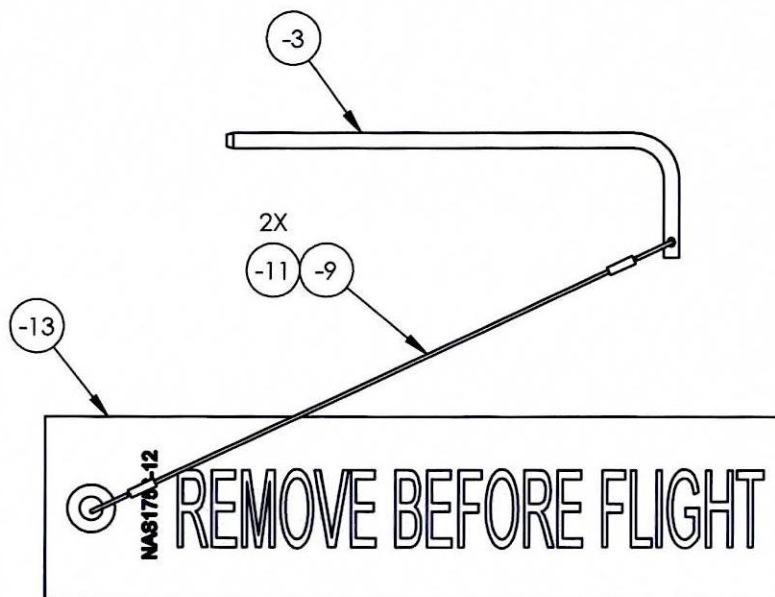
Change No:

Job No: 170181

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
A		CORRECTED BOM -3 FROM Ø3/16, CH'D BEND RADIUS FROM .563.	4/25/2011	RJC	RW
1		DELETED -1 WELDMENT, -5 AND -7. -3 EXTENDED PIN SHORT END FROM 1.62 TO 2.04, ADDED Ø.094 HOLE FOR LANYARD.	8/29/2012	RJC	SE
2		-3 CH'D BEND RADIUS WAS R.56 IS R.50.	2/12/2013	BIM	GE
3	15-0097	-3 CORRECTED VIEW NO CHAMFER ON SHORT END OF PIN. -9 CH'D B/O INFO WAS REID #CL2C, IS CARR-LANE #CL-2-C.	4/22/2015	RJC	JAG

TEO ATTACHED



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 170181
1801-11

NOTES:

- PART OF KIT RBW6705G00132-3G.
- QUANTITY 1 PER KIT.

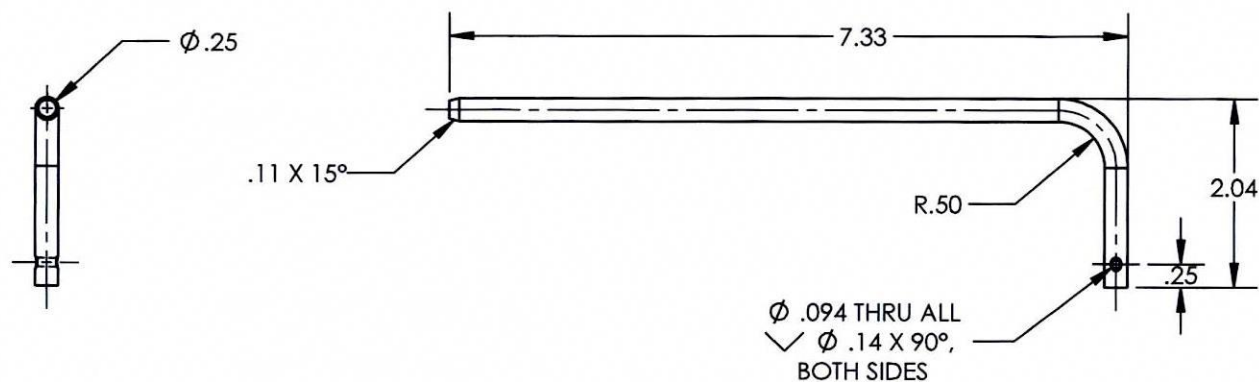
DART AEROSPACE	
TITLE RIGGING PIN ASSY. N° 4	
DWG NO. RBW6705G02331-3G	REV 3
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1	DRAWN BY: PERRITT APPROVED: D Weil HEAT TREAT FINISH SPEC USED ON MODEL AGUSTA
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	SCALE 1:3 DATE 1/28/2010 SHEET 1 OF 2

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-3	1	PIN N°4	O-1		2
		B/O	-9	1	LANYARD CABLE	COATED STEEL	Ø1/16 X 10 (CARR LANE #CL-2-C)	1
		B/O	-11	2	FERRULE	ALUMINUM	Ø1/16 X 3/8 (MCMASTER-CARR #3896T31)	1
		B/O	-13	1	REMOVE BEFORE FLIGHT FLAG	NYLON	NAS 1756-12 (AIRCRAFT HARDWARE)	1

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
A		CORRECTED BOM -3 FROM Ø3/16, CH'D BEND RADIUS FROM .563.	4/25/2011	RJC	RW
1		-3 EXTENDED PIN SHORT END FROM 1.62 TO 2.04, ADDED Ø.094 HOLE FOR LANYARD.	8/29/2012	RJC	SE
2		-3 CH'D BEND RADIUS WAS R.56 IS R.50.	2/12/13	BIM	GE
3	15-0097	-3 CORRECTED VIEW NO CHAMFER ON SHORT END OF PIN.	4/22/2015	RJC	JAG

TEO ATTACHED



(-3)

PIN N°4

DART AEROSPACE	
TITLE RIGGING PIN ASSY. N° 4	
DWG NO. RBW6705G02331-3G-3	REV 3
MATL O-1	DRAWN BY: PERRITT
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .005	HEAT TREAT RC 26-30
.XX ± .01	FINISH CAD PLATE YELLOW
.X ± .1	SPEC QQ-P-416F, TYPE II, CLASS II
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	AGUSTA
SCALE 1:2	DATE 1/28/2010
SHEET 2 OF 2	



ENGINEERING ORDER # TEO17-651

SCALE: NTS

SHEET 1 OF 1

DRAWING NO. RBW6705G02331-3G

REV: 3

EFF.: NEXT ORDER

CHANGE CATEGORY

TITLE: RIGGING PIN ASSY # 4

☐ MAJOR ☒ MINOR

DATE 17.09.13

APPROVED: WM 10/09/2017

MFG. APPR.: DP 09/26/2017

CHECKED: SAC 09/25/2017

DRAWN: VM 09/25/2017

TRANSACTION CODE (TC):

A-ADD C-CREATE
R-REVISE D-DELETE

REASON: PURCHASE # IS MISSING

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USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION
FROM DART AEROSPACE LTD.

WAS : RBW6705G02331-3G-3 REV 3 : PURCHASE # ?

IS : RBW6705G02331-3G-3 REV 3 : PURCHASE # : McMaster#8893K204

DOCUMENTS EFFECTED: ☐ PATTERN ☐ INSTALL INSTRUCTIONS ☒ BOM



Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038999

Drop Ship

to Groupe Altech PO 37002

Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

PO No: PO038999
PO Date: 2/8/18
Due Date: 2/13/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Baker, Diane

Phone: dbaker@dartaero.com

E-MAILED
FEB-13-2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items				Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
Line Item	Job	Part	Description							
1	170907	C3-12-1	Lock Bushing 1-Issue P/O to Metcore ; P/O _____ HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED Part made from 4140 Round Bar 750 Metcore to ship directly to Groupe Altech	Firmed	2/13/18	40 pcs	0 pcs	40 pcs	\$7 50/pcs	\$300 00
2	170175	RBW6705G02131-3G	Rigging Pin Assembly N2 1-Issue P/O to Metcore ; P/O _____ RC: 26-30 2-Bead blast 3- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER To ship directly to Groupe Altech Part made from 01R Tool Steel Ship Directly to Group Altech	Firmed	2/13/18	6 pcs	0 pcs	6 pcs	\$25 00/pcs	\$150 00
3	170178	RBW6705G02231-3G	Rigging Pin Assembly N3 1-Issue P/O to Metcore ; P/O _____ RC: 26-30 2-Bead blast 3- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER To ship directly to Groupe	Firmed	2/13/18	4 pcs	0 pcs	4 pcs	\$25 00/pcs	\$100 00



Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038999

Items									
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)
4	170181	RBW6705G02331-3G	Altech Part made from 01R Tool Steel Rigging Pin Assembly N4 1--Issue P/O to Metcore P/O RC: 26-30 2-Bead blast 3- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER To ship directly to Groupe Altech Part made from 01R Tool Steel	Firmed	2/13/18	2 pcs	0 pcs	2 pcs	\$25 00/pcs
							2x		AT 17/02/26
5	171452	D4202-1	Spacer HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED Part made from 6061-T6 Round Tube 500x.058W	Firmed	2/13/18	500 pcs	0 pcs	500 pcs	\$1 21362/pcs
							500x		AT 17/02/23
6	168221	646 3014	Blade FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS PART ARE MADE FROM AISI A2 TOOL STEEL	Firmed	2/13/18	11 pcs	0 pcs	11 pcs	\$28 41/pcs
							11x		AT 18/02/21
7	170289	D5518-1	Crossbolt Spacer PO to Metcor HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED PART ARE MADE FROM 6061-T6 MATERIAL	Firmed	2/13/18	50 pcs	0 pcs	50 pcs	\$1 21362/pcs
							50x		AT 18/02/23
Grand Total:									\$1,580.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
325329	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

GROUP ALTECH

2455 ALPERN

ST LAURENT

QC H4S1N9

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
38999	N/A	O1		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
SEL HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified		TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	26 - 30 HRC		12	26 - 28 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
12	1	RBW6705G02131-3G (6) RBW6705G02131-3G JOB.170175 (4) RBW6705G02231-3G JOB 170178 (2) RBW6705G02331-3G JOB 170181 1 BOITE DE CARTON

COMMENTAIRES / comments

SALT HARDEN 1475F, 20MIN

TEMPER 1100F, 2HRS

RE-TEMPER 1150F, 2HRS

Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

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Heat treatment (HT) was performed with equipment that meets the requirements of requested specification.

All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

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Vincent Caron



23 FEB. 2018



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039002

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO039002

PO Date: 2/9/18

Due Date: 3/7/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Revised
8

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	170907	C3-12-1	Lock Bushing ISSUE P/O TO GROUPE ALTECH: QQ-N-290, CLASS 2 GRADE E OR F. NICKEL PLATE TO .0004-.0006 C OF C IS REQUIRED	Firmed	2/16/18	40 pcs	0 pcs	40 pcs	\$3.00/pcs	\$120.00
2	170175	RBW6705G02131-3G	Rigging Pin Assembly N2 -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	2/16/18	6 pcs	0 pcs	6 pcs	\$7.50/pcs	\$45.00
3	170178	RBW6705G02231-3G	Rigging Pin Assembly N3 -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	2/16/18	4 pcs	0 pcs	4 pcs	\$7.50/pcs	\$30.00
4	170181	RBW6705G02331-3G	Rigging Pin Assembly N4 -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	2/16/18	2 pcs	0 pcs	2 pcs	\$7.50/pcs	\$15.00
Grand Total:										\$210.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)



Certificat de Conformité / Certificate of Compliance

(007054-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

007054 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
28-Feb-2018		Aman Kaur		039002				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	C3-12-1 Rev.	C3-12-1 01 - E-NIC STEEL 500 [E-NICKEL STEEL 500]	E-NICKEL-500	40	40	0	0	0
			CH					
2	RBW6705G02131-3G Rev.	RBW6705G02131-3G ZINC-CLEAR ASTM B633, TYPE 1, SC2 C OF C REQUIRED	ZINC	6	6	0	0	0
			CH					
3	RBW6705G02231-3G Rev.	RBW6705G02231-3G ZINC-CLEAR ASTM B633, TYPE 1, SC2 C OF C REQUIRED	ZINC	4	4	0	0	0
			CH					
4	RBW6705G02331-3G Rev.	RBW6705G02331-3G ZINC ASTM B633 TYPE 1, SC2 C OF C REQUIRED	ZINC	2	2	0	0	0
			CH					

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements
 Our financial and legal responsibility will not be higher than the amount of invoice.